

TO : Clay McDaniel, Engineer, Technical Branch, HWD

THROUGH : Tammie Hynum, Technical Branch Manager, HWD
Jim Rigg, Geol. Supervisor, Technical Branch, HWD
Annette Cusher, Engineer Supervisor, Technical Branch, HWD

FROM : Cindy Greenway, Geologist, Technical Branch, HWD

DATE : July 13, 2009

SUBJECT : Comments regarding the FS submitted by AECOM
Cedar Chemical Corporation Facility, Helena-West Helena, AR.,
December 2007

I have reviewed the referenced document and have the following comments:

- Although this investigation was limited to Site 3, I think it is imperative to note the conditions near the production units, and the concentration of dinoseb in the perched zone aquifer. Temporary wells Tw-1 and Tw-6 had concentrations of dinoseb that were at 5400 mg/kg (at 16' bgs) and 22,000 mg/kg (at 19' bgs) respectively in the September of 2008 AMEC FI Report. MW- 16 and MW-18 had concentrations of 840 mg/kg (at 24' bgs) and 1400 mg/kg (at 24' bgs) respectively as well in the same 2008 report. These results were reported for dinoseb in the perched zone groundwater. All of the Monitoring wells are just to the northeast of Site 3
- It is my understanding that previous investigations at Site 3 conducted by Ensafé (2001) and ADEQ (2005), were predominately to assess the impact of surface water runoff. Considering the elevated dinoseb levels in the soil and perched aquifer near Unit 6, it is unfeasible at this time to ensure that Site 3 will not be impacted in the future. Not only could this occur through surface water runoff but also through infiltration and leaching into groundwater from the perched zone to the alluvial zone.
- Also noted from soil data in Figure 19 from the Current Conditions Report, November 2007, which the dinoseb may get suspended within the clay stringers that exists in the stratigraphy of the area. The area, which predominately consists of silts, clays, and sands, contain clays that will bind to certain chemicals if the correct ions are present. This appears to be the case if you take a particular boring for example IMSB-1, which exuberate levels of dinoseb in the soil at 1-3' < 1.6 mg/kg; then at **3-8' 63,000 mg/kg**; and then 8-12' levels are < 1.7 mg/kg. This is apparent site wide.
- The last bullet reiterates the fact that we feel the sampling conducted by AECOM in

May 2009 contains insufficient data to conclude that no contamination exists within this area considering only the 4-8' sample was submitted to the laboratory for five (5) soil borings for analysis. It is highly plausible that the dinoseb has either moved farther down binding to clays at deeper intervals due to infiltration of 13 years of rain, or that it has migrated to groundwater

- **Identification and Selection of Remedial Alternatives**

ADEQ does not agree that Site 3 could be remediated strictly through Alternative 2- institutional controls and No Further Action, as suggested in the Feasibility Study due to the known dinoseb contamination in the soil and groundwater north and to the northeast on site. Groundwater is known to move south, southeast at this location which is the preferential pathway for known contaminants to travel. This proves that Site 3 could be potentially impacted in the future by dinoseb and other COC's.